



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,701	11/13/2003	Tyler Sims	10030071-1	9254

7590 01/10/2006

AGILENT TECHNOLOGIES, INC.
Legal Department, DL 429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

EXAMINER

MRUK, GEOFFREY S

ART UNIT PAPER NUMBER

2853

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,701

Applicant(s)

SIMS, TYLER

Examiner

Geoffrey Mruk

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,5-7 and 10-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 13 November 2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election of Species 1c in the reply filed on 9 December 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Maze et al (US 6,227,640 B1).

With respect to claim 1, Maze discloses a heating device (Column 3, line 56) within an integrated circuit (Column 6, lines 10-32), comprising:

- a first conductive lead (Fig. 13, element 505);
- a second conductive lead (Fig. 13, element 503);
- a third conductive lead (Fig. 13, element 1309);
- a first resistive region (Fig. 13, element 1305) connected between the first conductive lead and the third conductive lead and,

Art Unit: 2853

- a second resistive region (Fig. 13, element 1307) connected between the second conductive lead and the third conductive lead;
- wherein a side formed by the first conductive lead and the first resistive region is parallel to a side formed by the second conductive lead and the second resistive region (Column 9, lines 50-67).

With respect to claim 4, Maze an insulator (Column 9, lines 50-67, i.e. split resistor) is placed between the side formed by the first conductive lead (Fig. 13, element 505) and the first resistive region (Fig. 13, element 1305) and the side formed by the second conductive lead (Fig. 13, element 503) and the second resistive region (Fig. 13, element 1303), except for an area (Fig. 10, element 901, i.e. substrate supporting the electrical elements of Fig. 13) immediately adjacent to the third conductive lead (Fig. 13, element 1309) where a third resistive region separates the first resistive region and the second resistive region; and, wherein resistivity of the third resistive region is identical to resistivity of the first resistive region and of the second resistive region (Column 8, lines 42-58).

With respect to claim 9, Maze the integrated circuit is used within an inkjet printhead (Column 4, lines 45-48).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maze et al. (US 6,227,640 B1) in view of Fouquet et al. (US 5,699,462).

With respect to claim 8, Maze discloses a heating device (Column 3, line 56) and an integrated circuit (Column 6, lines 10-32).

However, Maze fails to disclose a planar light circuit.

Fouquet discloses an internal reflection optical switch employing thermal activation where "A switching element is thermally actuated to displace liquid from a gap at the intersection of a first optical waveguide and a second optical waveguide. The actuation is achieved by heaters that create bubbles by vaporizing a liquid in the gap or by degassing a fluid that contains dissolved gas" (Column 3, lines 17-22).

At the time of the invention, it would have been obvious to combine the teachings of Fouquet with the drop generator of Maze. The motivation for doing so would have been "Each thermally actuated switching element may be operated utilizing techniques employed in inkjet printing, explosively ejecting fluid from one location to another. In another embodiment, the thermally actuated switching element vaporizes a small bubble in a trench to divert the optical signal from one waveguide to another." (Column 3, lines 57-62).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey Mruk whose telephone number is 571 272-2810. The examiner can normally be reached on 7am - 330pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GSM
1/6/2006

GM


1/6/06
MANISH S. SHAH
PRIMARY EXAMINER